

Application No. 10/508,982
Attorney Docket No. 2002B045A

REMARKS

Claims 16-18 are in the case.

Applicants would like to thank Examiner O'Sullivan to the courtesies extended to their representative during the discussion of January 10, 2006. During the discussion, the unexpected results achieved by the present invention were discussed. It was agreed that, should applicant wish to pursue the original Claim 1, additional evidence would be provided. Also during the discussion it was pointed out that the "Garwood et al." reference was incorrectly cited on the Information Disclosure Statement as "U.S. 4,277,992". It is actually U.S. 4,227,992, as correctly cited in the original specification. A copy of this reference was given to Examiner O'Sullivan during the interview. A new Information Disclosure Statement correctly citing this reference accompanies this Response.

Rather than respond to the rejection of Claim 1 by submitting new evidence, on further consideration Applicants have chosen the alternative of amending the claims to pursue the invention covered by Claims 16-18 (as currently presented), without prejudice as to filing continuations with respect to the subject matter covered by Claim 1. This amendment has the virtue of particularly pointing out the most important use of the invention originally claimed (the production of alcohols and alkyl aromatic compositions) and also has the further virtue of avoiding the double patenting rejection made in the previous Official Action, thus narrowing the issues.

Thus, the present invention is directed to processes for producing long chain alcohols and alkyl aromatic compositions. These processes are important *inter alia* for producing detergents.

The previous claims were rejected over Blain et al. (US 5,026,933), in view of "acknowledged prior art". Blain et al. is said to teach olefin oligomerization with surface deactivated ZSM-23 catalyst and the present specification is said to teach that it is prior art to hydroformylate olefins to product alcohols. While we agree with statements,

Application No. 10/508,982
Attorney Docket No. 2002B045A

Applicants urge that the combination of references does not fairly suggest the present invention.

As stated in the present disclosure, the oligomerization of n-butene results in branching at the odd numbered carbon positions, whereas the oligomerization of propylene results in branching at the even numbered carbon positions. The odd numbered carbon position is preferred where increased biodegradability of detergents is desired. However, it would also be desirable to use propylene as a feedstock, since that is available in large amounts. The present inventors have surprisingly discovered that using the right ratio of butene to propylene, branching at the odd numbered carbon position is achieved. This is very beneficial for biodegradable detergent manufacture since it allows greater flexibility in feedstock useage.

Blain et al. clearly states that the olefins produced by the processed disclosed therein have only methyl side groups. See, for instance, col. 5, lines 38-40. Blain et al. says nothing about biodegradability nor about the proper ratio of butene and propylene feedstocks required to achieve the desired result. In addition, according to the present claims, branching in the molecules produced have at least methyl and ethyl groups. The olefins produced having this unique branching may then be hydroformylated to alcohols or used as alkylating agents in the process taught in the present specification at paragraphs [0025] *et. seq.*

In addition to not suggesting the proper ratio of butene to propylene, the combination of Blain et al. and the "admitted prior art" also does not suggest that hydroformylation or alkylation of aromatic compounds would result in materials useful for detergent which have high biodegradability because of the unique branching and presence of branching at the odd carbon number position. Applicants respectfully urge that it is not sufficient that the combination of prior art meet the limitations of the claims (which said combination does not, for the aforementioned reasons) but rather the suggestion of combination as well as the expectation of success must also be present in the prior art. There is no suggestion that the steps of hydroformylation or alkylation would yield a more biodegradable product than what is fairly suggested by Blain et al. in combination with the admission that hydroformylation *per se* is old.

Application No. 10/508,982
Attorney Docket No. 2002B045A


Thus, the claims as presently presented cannot fairly suggest the present invention and it is respectfully requested that the rejection under §103 be withdrawn.

The double patenting rejection is believed obviated by the amendments, as Claims 16-18 were not part of the rejection.

Applicants believe the present application is in condition for examination on the merits and early indication of such is earnestly solicited.

Respectfully submitted,

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Date


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